WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a gate electrode formed over a substrate;

a gate insulating film formed over the gate electrode;

a semiconductor film comprising silicon formed over the gate electrode with the gate insulating film interposed therebetween, said semiconductor film including a channel formation region; and

source and drain regions comprising silicon formed on said semiconductor film,

wherein a peak position of a Raman spectrograph of said semiconductor film is shifted to a lower wavenumber side from 520 cm^{-1}.

2. The semiconductor device according to claim 1 wherein said gate electrode comprises molybdenum.

3. The semiconductor device according to claim 1 wherein said gate insulating film comprises silicon oxide.

4. A semiconductor device comprising:

a gate electrode formed over a substrate;

a gate insulating film formed over the gate electrode;

a semiconductor film comprising silicon formed over the gate electrode with the gate insulating film interposed therebetween, said semiconductor film including a channel formation region; and

source and drain regions comprising silicon formed on said semiconductor film,

wherein a peak position of a Raman spectrograph of said semiconductor film is shifted to a lower wavenumber side from 520 cm^{-1} and said semiconductor film has a distortion in the lattice.

5. The semiconductor device according to claim 4 wherein said gate electrode comprises molybdenum.

6. The semiconductor device according to claim 4 wherein said gate insulating film comprises silicon oxide.

7. A semiconductor device comprising:

a gate electrode formed over a substrate;

a gate insulating film formed over the gate electrode;

a semiconductor film comprising silicon formed over the gate electrode with the gate insulating film interposed therebetween, said semiconductor film including a channel formation region; and

source and drain regions comprising silicon formed on said semiconductor film,

wherein a peak position of a Raman spectrograph of said semiconductor film is shifted to a lower wavenumber side from 520 cm^{-1} and said semiconductor film has a distortion in the lattice, and the semiconductor film no barrier against carriers at grain boundaries.

8. The semiconductor device according to claim 7 wherein said gate electrode comprises molybdenum.

9. The semiconductor device according to claim 7 wherein said gate insulating film comprises silicon oxide.

10. The semiconductor device according to claim 1 wherein said gate insulating film comprises silicon oxide containing fluorine.

11. The semiconductor device according to claim 4 wherein said gate insulating film comprises silicon oxide containing fluorine.

12. The semiconductor device according to claim 7 wherein said gate insulating film comprises silicon oxide containing fluorine.